



UTILITIES CO.

A Division of MDU Resources Group, Inc.

400 North Fourth Street
Bismarck, ND 58501
(701) 222-7900

August 14, 2017

Executive Secretary
North Dakota Public Service Commission
State Capitol Building
Bismarck, ND 58505-0480

Re: Case No. PU-17-002 (Therm Billing)
Monthly Report – June 2017

Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc., herewith submits the following information, pursuant to the Ordering paragraphs one and two of the Order issued in Case No. 11,006, dated October 20, 1987 and pursuant to the North Dakota Administrative Code 69-09-01-02, part 2.

1. Attachment A is a schedule showing the thermal billing factors by community that reflect the BTU values shown on Attachment B and were used for billing purposes in July 2017.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of June 2017.
3. Attachment C is a listing which states the type of measuring device in place at each zone.
4. Attachment D is a monthly list of the heating value data, by zone, for the most recent 12-month period and an average thereof. It is being provided pursuant to a Staff request.
5. Attachment E provides a brief explanation of the thermal variances, where applicable, for the month of June 2017.

Please acknowledge receipt by stamping or initialing the duplicate copy of this letter attached hereto and returning the same in the enclosed self-addressed, stamped envelope. Should the Commission or its Staff have any comments or questions with respect to these reports, please call me.

Sincerely,

A handwritten signature in purple ink that reads 'Tamie Aberle'.

Tamie Aberle
Director of Regulatory Affairs

Montana-Dakota Utilities Co.
Therm Billing Factors - North Dakota
Jul-17

Town	Heat Zone	Therm Factor
MDU-303-ALEXANDER	025	1.1372
MDU-308-ARNEGARD	025	1.1372
MDU-314-APPLE VALLEY	271	1.1501
MDU-318-BEACH	032	1.0138
MDU-319-BELFIELD	032	1.0212
MDU-323-BERTHOLD	262	1.1258
MDU-327-BISMARCK	028	1.1492
MDU-330-BOWMAN	034	0.9340
MDU-337-BURLINGTON	262	1.1501
MDU-343-CARRINGTON	273	1.1501
MDU-344-CLEVELAND	272	1.1411
MDU-364-CAVALIER	273	1.1744
MDU-365-DAWSON	271	1.1420
MDU-368-DES LACS	262	1.1339
MDU-369-DICKINSON	031	1.0662
MDU-374-FT TOTTEN	273	1.1582
MDU-375-DEVILS LAKE	273	1.1582
MDU-379-BARLOW	273	1.1501
MDU-384-EPPING	264	1.0815
MDU-387-ELDRIDGE	272	1.1492
MDU-407-GLADSTONE	031	1.0662
MDU-411-GLEN ULLIN	031	1.0739
MDU-413-GOLVA	032	0.9989
MDU-416-GARRISON	262	1.1339
MDU-417-GRAFTON	273	1.1825
MDU-429-HEBRON	031	1.0739
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1572
MDU-459-KILLDEER	033	1.1117
MDU-463-LANGDON	273	1.1501
MDU-469-LEFOR	031	1.0662
MDU-474-LIGNITE	263	1.0607
MDU-475-LINTON	802	1.0257
MDU-478-LINCOLN	028	1.1492
MDU-488-MCKENZIE	271	1.1501
MDU-494-MEDINA	271	1.1420
MDU-498-MANDAN	028	1.1492
MDU-500-MARMARTH	034	0.9204
MDU-505-MINOT	262	1.1501
MDU-510-MOTT	031	1.0662
MDU-512-MAX	262	1.1501
MDU-522-NEW ENGLAND	031	1.0893
MDU-524-NEW SALEM	028	1.1249
MDU-532-NEW ROCKFORD	273	1.1501
MDU-539-PARK RIVER	273	1.1744
MDU-540-PALERMO	262	1.1258
MDU-558-RAY	264	1.0815
MDU-561-REGENT	031	1.0662
MDU-563-RHAME	034	0.9069

MDU-564-RICHARDTON	031	1.0585
MDU-568-ROSS	261	1.1027
MDU-572-RUTHVILLE	262	1.1501
MDU-574-SANBORN	272	1.1572
MDU-583-SENTINEL BUTTE	032	1.0138
MDU-588-SOUTH HEART	031	1.0585
MDU-717-SPIRITWOOD	272	1.1572
MDU-590-SPRINGBROOK	264	1.0815
MDU-591-STANLEY	261	1.1107
MDU-593-STEELE	271	1.1420
MDU-598-SHEYENNE	273	1.1582
MDU-605-SURREY	262	1.1502
MDU-610-TAPPEN	271	1.1420
MDU-611-TAYLOR	031	1.0585
MDU-616-TIOGA	261	1.1187
MDU-619-TURTLE LAKE	262	1.1339
MDU-620-TRENTON	024	1.0921
MDU-624-UNDERWOOD	262	1.1339
MDU-625-VALLEY CITY	272	1.1653
MDU-629-WALHALLA	273	1.1744
MDU-632-WATFORD CITY	610	1.1173
MDU-636-WHEELOCK	264	1.0737
MDU-637-WHITE EARTH	261	1.1107
MDU-642-WILLISTON	024	1.0921
MDU-646-WASHBURN	262	1.1420
MDU-647-WILTON	262	1.1258
MDU-664-RIVERDALE	262	1.1339
MDU-691-FAIRVIEW	241	1.1111
MDU-712-MINOT AFB	262	1.1501
MDU-718-FAIRMOUNT	600	1.1307
MDU-732-NEKOMA	273	1.1501
MDU-732-MSR SITE	273	1.1501

Source Daily Summary

June 2017

Number:	251	Pressure Base:	14.730	Contract Day:	1
Name:	SDNY BDR-MNDK JNCTN-SDNY PLT	Temperature Base:		Contract Hour:	9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7275	1178.3	1199.2	1194.0	1.028	3.617	69.620	21.707	3.598	0.137	0.263	0.016	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1402.52
2	0.7269	1176.8	1197.7	1192.7	1.040	3.633	69.631	21.747	3.559	0.127	0.238	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1401.36
3	0.7240	1173.7	1194.5	1189.6	1.018	3.593	70.005	21.618	3.376	0.126	0.239	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1400.37
4	0.7268	1179.6	1200.4	1195.4	0.976	3.548	69.988	21.305	3.662	0.160	0.318	0.022	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1404.63
5	0.7204	1169.6	1190.3	1185.4	0.978	3.558	70.401	21.615	3.060	0.124	0.237	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1399.04
6	0.7208	1171.4	1192.2	1187.5	0.960	3.516	70.316	21.715	3.129	0.115	0.223	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1400.82
7	0.7200	1169.5	1190.2	1185.5	0.962	3.555	70.372	21.714	3.034	0.116	0.222	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1399.32
8	0.7173	1168.6	1189.3	1184.5	0.900	3.447	70.910	21.336	3.038	0.116	0.225	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1400.86
9	0.7211	1170.9	1191.6	1186.9	0.970	3.562	70.489	21.306	3.250	0.133	0.259	0.016	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1399.88
10	0.7214	1171.8	1192.6	1187.9	0.978	3.519	70.360	21.530	3.215	0.125	0.244	0.015	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1400.76
11	0.7175	1167.8	1188.5	1183.9	0.925	3.478	70.798	21.445	3.010	0.108	0.210	0.013	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1399.73
12	0.7144	1163.5	1184.1	1179.6	0.897	3.496	71.326	21.001	2.937	0.109	0.210	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1397.55
13	0.7192	1168.1	1188.8	1184.5	0.982	3.536	70.446	21.746	2.934	0.113	0.217	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1398.41
14	0.7187	1168.9	1189.6	1185.4	0.934	3.515	70.435	21.872	2.911	0.106	0.203	0.013	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1399.83
15	0.7241	1179.1	1199.9	1195.3	0.897	3.451	70.410	20.931	3.957	0.111	0.216	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1406.66
16	0.7157	1165.4	1186.1	1181.6	0.894	3.494	71.447	20.571	3.201	0.122	0.240	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1398.65
17	0.7207	1172.8	1193.6	1189.1	0.920	3.479	70.790	20.945	3.417	0.134	0.275	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1402.50
18	0.7217	1174.5	1195.3	1190.7	0.911	3.479	70.572	21.196	3.392	0.135	0.274	0.020	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1403.54
19	0.7196	1171.0	1191.7	1187.0	0.921	3.493	70.422	21.777	3.021	0.116	0.223	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1401.41
20	0.7214	1173.1	1193.8	1189.0	0.950	3.478	70.637	21.158	3.297	0.142	0.294	0.022	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1402.18
21	0.7130	1160.6	1181.2	1176.6	0.900	3.532	71.621	20.677	2.910	0.113	0.220	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1395.48
22	0.7124	1160.2	1180.7	1176.5	0.874	3.538	71.682	20.694	2.851	0.110	0.221	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1395.54
23	0.7161	1166.2	1186.8	1182.6	0.891	3.499	70.966	21.358	2.959	0.103	0.200	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1399.12
24	0.7184	1169.6	1190.3	1185.9	0.901	3.489	70.801	21.237	3.245	0.103	0.199	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1400.95
25	0.7172	1168.1	1188.8	1184.2	0.894	3.482	70.918	21.245	3.134	0.104	0.199	0.013	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1400.33
26	0.7184	1170.8	1191.5	1186.9	0.894	3.421	70.879	21.183	3.280	0.108	0.209	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1402.47
27	0.7169	1167.9	1188.6	1183.9	0.893	3.462	70.941	21.302	3.071	0.105	0.203	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1400.45
28	0.7160	1165.4	1186.0	1181.4	0.927	3.488	71.059	21.198	2.999	0.104	0.202	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1398.23
29	0.7183	1168.4	1189.1	1184.5	0.939	3.494	70.637	21.609	2.972	0.110	0.214	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1399.68
30	0.7199	1170.0	1190.7	1186.0	0.958	3.525	70.465	21.590	3.093	0.116	0.226	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1399.94
Avg	0.7195	1170.0	1190.8	1186.1	0.937	3.513	70.645	21.344	3.184	0.118	0.231	0.015	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1400.41

Zone 211

Source Daily Summary

June 2017

Number: 571

Pressure Base: 14.730

Contract Day: 1

Name: WILLISTON BDR-CHARBN STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6802	1125.2	1145.1	1141.9	0.743	2.842	77.193	16.892	2.108	0.064	0.135	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1385.24	
2	0.6794	1124.5	1144.4	1141.2	0.739	2.814	77.234	16.979	2.028	0.061	0.125	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1385.25	
3	0.6813	1126.6	1146.6	1143.4	0.759	2.831	76.913	17.234	2.044	0.064	0.133	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1385.94	
4	0.6807	1125.7	1145.7	1142.4	0.766	2.824	76.942	17.286	1.980	0.059	0.124	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1385.39	
5	0.6794	1123.7	1143.6	1140.4	0.760	2.835	77.053	17.283	1.889	0.053	0.110	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1384.27	
6	0.6796	1124.0	1143.9	1140.7	0.770	2.825	77.037	17.286	1.898	0.054	0.111	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1384.32	
7	0.6773	1121.1	1141.0	1137.8	0.753	2.803	77.400	17.061	1.808	0.051	0.107	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1383.23	
8	0.6796	1124.6	1144.5	1141.3	0.764	2.787	77.106	17.227	1.919	0.057	0.120	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1385.18	
9	0.6801	1125.0	1145.0	1141.8	0.760	2.818	76.991	17.311	1.920	0.059	0.122	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1385.18	
10	0.6806	1126.6	1146.5	1143.3	0.769	2.756	76.873	17.518	1.890	0.056	0.118	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1386.56	
11	0.6790	1123.8	1143.7	1140.5	0.773	2.776	77.088	17.362	1.819	0.052	0.111	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1384.71	
12	0.6767	1119.9	1139.8	1136.5	0.749	2.830	77.565	16.819	1.855	0.052	0.111	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1382.30	
13	0.6765	1119.6	1139.4	1136.3	0.743	2.834	77.519	16.947	1.788	0.049	0.103	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1382.18	
14	0.6768	1120.5	1140.3	1137.1	0.748	2.803	77.478	16.999	1.801	0.050	0.104	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1382.94	
15	0.6765	1119.9	1139.7	1136.6	0.745	2.817	77.524	16.969	1.757	0.055	0.114	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1382.50	
16	0.6764	1120.1	1139.9	1136.8	0.730	2.818	77.479	17.054	1.749	0.050	0.103	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1382.87	
17	0.6776	1121.7	1141.5	1138.4	0.750	2.810	77.325	17.131	1.805	0.053	0.109	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1383.50	
18	0.6741	1117.2	1137.0	1133.8	0.728	2.782	77.909	16.698	1.722	0.048	0.098	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1381.61	
19	0.6719	1114.8	1134.6	1131.4	0.712	2.746	78.337	16.330	1.714	0.048	0.097	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1380.92	
20	0.6754	1119.1	1138.9	1135.8	0.717	2.806	77.627	16.965	1.722	0.049	0.098	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1382.67	
21	0.6783	1121.5	1141.3	1138.2	0.709	2.950	77.061	17.348	1.755	0.054	0.106	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1382.56	
22	0.6788	1122.5	1142.4	1139.2	0.722	2.910	77.005	17.416	1.778	0.050	0.103	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1383.38	
23	0.6754	1117.4	1137.2	1134.0	0.716	2.910	77.662	16.790	1.755	0.050	0.102	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1380.55	
24	0.6741	1116.3	1136.1	1132.9	0.726	2.838	77.997	16.484	1.773	0.053	0.111	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1380.54	
25	0.6715	1113.6	1133.3	1130.2	0.712	2.785	78.402	16.240	1.694	0.050	0.102	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1379.81	
26	0.6772	1122.6	1142.4	1139.2	0.721	2.753	77.572	16.839	1.911	0.060	0.124	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1385.09	
27	0.6777	1122.2	1142.1	1138.9	0.715	2.832	77.290	17.172	1.809	0.053	0.111	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1384.15	
28	0.6774	1122.0	1141.9	1138.7	0.731	2.791	77.277	17.308	1.718	0.051	0.107	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1384.23	
29	0.6754	1119.5	1139.3	1136.2	0.737	2.752	77.642	17.012	1.684	0.051	0.106	0.007	0.009	0.000	0.000	0.000	0.000	0.000	1383.15	
30	0.6745	1118.1	1137.9	1134.7	0.735	2.754	77.806	16.865	1.668	0.050	0.104	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1382.33	
Avg	0.6773	1121.0	1141.2	1138.0	0.740	2.814	77.410	17.028	1.825	0.054	0.111	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1383.42	

Zone 24

Gas Composition and Properties

Effective June 1, 2017 09:00 - January 18, 2038 21:14

Source #: 0602160
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %	Property	Total Sample	C6 Plus Fraction
Carbon Dioxide, CO2	0.4998		1.1036	Pressure Base	14.730	
Nitrogen, N2	3.0197		4.2442	Temperature Base	60.00	
Methane, C1	74.7251		60.1463	HCDP @ Sample Pressure		
Ethane, C2	19.5280	5.2251	29.4609	Cricondentherm		
Propane, C3	2.0592	0.5657	4.5558	HV, Dry @ Base P, T	1161.05	
iso-Butane, iC4	0.0497	0.0162	0.1449	HV, Sat @ Base P, T	1140.84	
n-Butane, nC4	0.0953	0.0300	0.2779	HV, Sat @ Sample P, T	1161.05	
iso-Pentane, iC5	0.0068	0.0025	0.0246	Relative Density	0.6887	
n-Pentane, nC5	0.0076	0.0027	0.0275			
Neo-Pentane, NeoC5						
Hexanes Plus, C6+	0.0000	0.0000	0.0000			
Water, H2O						
Hydrogen Sulfide, H2S						
Oxygen, O2	0.0089		0.0143			
Carbon Monoxide, CO						
Hydrogen, H2						
Helium, He						
Argon, Ar						
				C6+: 100		
Totals	100.0001	5.8420	100.0000			

Sample

Date: 06/30/2017 Pressure: 302.0
Type: Composite Temperature: 0.0
Tech: RR H2O: lbs/mm
H2S: ppm

Remarks:

Analysis

Date: 07/03/2017 Instrument: WBI- 141
Cylinder: 370

Tech: MB

Remarks:

Zone 241

Source Daily Summary

June 2017

Number: 601

Pressure Base: 14.730

Contract Day: 1

Name: TIOGA STN-ROBINSON LAKE PLNT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7042	1155.0	1175.5	1171.5	0.850	3.125	72.737	20.582	2.472	0.074	0.142	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1397.43	
2	0.7097	1164.5	1185.1	1181.0	0.851	3.060	72.011	21.099	2.678	0.093	0.182	0.012	0.015	0.000	0.000	0.000	0.000	0.000	1403.30	
3	0.7074	1160.9	1181.5	1177.6	0.855	3.052	72.077	21.353	2.420	0.077	0.147	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1401.46	
4	0.7083	1162.1	1182.7	1178.7	0.859	3.063	72.027	21.287	2.496	0.082	0.162	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1401.91	
5	0.7049	1156.5	1177.0	1173.1	0.847	3.098	72.734	20.514	2.548	0.082	0.157	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1398.57	
6	0.7067	1159.7	1180.2	1176.3	0.855	3.059	72.261	21.147	2.425	0.078	0.151	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1400.63	
7	0.7083	1161.9	1182.4	1178.5	0.881	3.043	71.951	21.425	2.456	0.077	0.148	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1401.67	
8	0.7089	1162.7	1183.3	1179.2	0.882	3.048	71.895	21.437	2.488	0.075	0.151	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1402.02	
9	0.7071	1159.6	1180.2	1176.2	0.872	3.076	72.242	21.074	2.487	0.077	0.152	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1400.17	
10	0.7086	1162.4	1183.0	1178.9	0.866	3.059	72.073	21.141	2.591	0.083	0.164	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1402.04	
11	0.7082	1161.3	1181.9	1177.8	0.875	3.071	71.983	21.358	2.474	0.074	0.145	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1401.16	
12	0.7070	1158.9	1179.4	1175.3	0.882	3.099	72.216	21.114	2.444	0.074	0.148	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1399.34	
13	0.7067	1158.8	1179.3	1175.4	0.884	3.079	72.156	21.278	2.374	0.072	0.140	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1399.52	
14	0.7057	1157.9	1178.4	1174.4	0.856	3.076	72.422	20.990	2.415	0.075	0.148	0.007	0.011	0.000	0.000	0.000	0.000	0.000	1399.43	
15	0.7083	1162.3	1182.8	1178.8	0.846	3.069	71.999	21.319	2.519	0.074	0.152	0.009	0.013	0.000	0.000	0.000	0.000	0.000	1402.15	
16	0.7067	1160.5	1181.1	1177.1	0.814	3.077	72.406	20.809	2.640	0.080	0.157	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1401.63	
17	0.7081	1162.1	1182.7	1178.7	0.861	3.042	72.039	21.320	2.478	0.078	0.157	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1402.10	
18	0.7074	1161.3	1181.9	1177.7	0.858	3.031	72.083	21.362	2.420	0.076	0.150	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1401.84	
19	0.7056	1158.1	1178.6	1174.5	0.850	3.065	72.470	20.917	2.452	0.076	0.149	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1399.82	
20	0.7065	1159.3	1179.8	1175.6	0.856	3.068	72.272	21.161	2.392	0.076	0.151	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1400.26	
21	0.7079	1161.7	1182.2	1178.2	0.848	3.070	72.004	21.373	2.458	0.077	0.150	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1401.80	
22	0.7064	1159.4	1179.9	1176.2	0.850	3.066	72.158	21.362	2.321	0.076	0.147	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1400.55	
23	0.7075	1160.7	1181.3	1177.4	0.864	3.063	72.001	21.492	2.327	0.076	0.154	0.010	0.013	0.000	0.000	0.000	0.000	0.000	1401.05	
24	0.7074	1160.8	1181.3	1177.4	0.857	3.057	72.071	21.395	2.352	0.080	0.163	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1401.28	
25	0.7071	1159.7	1180.2	1176.1	0.847	3.111	72.213	21.109	2.451	0.082	0.164	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1400.24	
26	0.7063	1158.5	1179.0	1174.8	0.847	3.110	72.428	20.859	2.474	0.084	0.172	0.012	0.015	0.000	0.000	0.000	0.000	0.000	1399.55	
27	0.7065	1159.0	1179.6	1175.3	0.846	3.101	72.528	20.673	2.546	0.088	0.183	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1399.85	
28	0.7067	1160.2	1180.8	1176.7	0.842	3.055	72.233	21.211	2.387	0.082	0.165	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1401.22	
29	0.7053	1157.7	1178.2	1174.0	0.848	3.066	72.480	20.992	2.351	0.080	0.160	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1399.57	
30	0.7051	1157.5	1178.0	1173.8	0.833	3.085	72.520	20.901	2.407	0.079	0.155	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1399.50	
Avg	0.7070	1160.0	1180.6	1176.5	0.856	3.071	72.223	21.135	2.458	0.079	0.155	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1400.70	

Zone 261

Source Daily Summary

June 2017

Number: 091

Pressure Base: 14.730

Contract Day: 1

Name: MNT BRD-PLRMO BRD-BIS STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7341	1171.4	1192.1	1188.2	0.875	4.896	68.280	21.575	3.904	0.134	0.303	0.016	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1388.06
2	0.7344	1170.7	1191.4	1187.4	0.864	4.979	68.330	21.370	3.957	0.139	0.318	0.023	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1386.96
3	0.7327	1169.8	1190.5	1186.6	0.873	4.861	68.521	21.446	3.821	0.135	0.304	0.020	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1387.51
4	0.7324	1169.3	1190.1	1186.4	0.871	4.862	68.519	21.502	3.769	0.135	0.304	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1387.31
5	0.7322	1167.9	1188.6	1184.6	0.864	4.940	68.580	21.344	3.786	0.138	0.311	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1385.80
6	0.7330	1167.5	1188.2	1184.4	0.869	5.029	68.358	21.552	3.689	0.143	0.323	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1384.60
7	0.7334	1167.1	1187.7	1183.9	0.871	5.095	68.271	21.569	3.685	0.144	0.326	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1383.63
8	0.7324	1165.8	1186.5	1182.6	0.866	5.083	68.445	21.432	3.671	0.143	0.322	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1383.12
9	0.7320	1165.7	1186.4	1182.5	0.870	5.050	68.446	21.531	3.608	0.141	0.317	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1383.35
10	0.7318	1166.3	1187.0	1183.1	0.875	4.984	68.471	21.609	3.572	0.139	0.313	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1384.25
11	0.7307	1166.4	1187.0	1183.3	0.878	4.874	68.626	21.618	3.530	0.135	0.302	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1385.37
12	0.7312	1166.9	1187.5	1183.7	0.881	4.890	68.557	21.642	3.552	0.135	0.306	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1385.43
13	0.7318	1166.4	1187.0	1183.4	0.857	5.013	68.480	21.546	3.612	0.139	0.315	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1384.27
14	0.7308	1166.3	1187.0	1183.5	0.856	4.916	68.634	21.546	3.570	0.135	0.306	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1385.28
15	0.7346	1167.5	1188.2	1184.6	0.854	5.205	68.121	21.497	3.812	0.143	0.329	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1383.03
16	0.7301	1165.5	1186.1	1182.5	0.873	4.878	68.818	21.371	3.580	0.135	0.307	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1384.87
17	0.7305	1166.5	1187.2	1183.6	0.878	4.852	68.690	21.550	3.560	0.133	0.302	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1385.66
18	0.7316	1167.8	1188.5	1184.9	0.877	4.878	68.509	21.660	3.602	0.134	0.304	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1386.15
19	0.7324	1168.6	1189.3	1185.6	0.872	4.911	68.475	21.549	3.700	0.140	0.315	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1386.31
20	0.7317	1167.9	1188.6	1184.9	0.874	4.883	68.539	21.588	3.631	0.137	0.311	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1386.21
21	0.7318	1168.1	1188.8	1184.9	0.875	4.878	68.527	21.608	3.625	0.137	0.312	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1386.32
22	0.7315	1167.7	1188.3	1184.6	0.872	4.880	68.564	21.588	3.610	0.137	0.310	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1386.11
23	0.7363	1168.9	1189.6	1186.0	0.872	5.252	67.877	21.608	3.858	0.149	0.341	0.021	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1383.09
24	0.7408	1170.7	1191.4	1187.9	0.870	5.569	67.161	21.796	4.036	0.158	0.365	0.022	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1380.97
25	0.7376	1170.2	1190.9	1187.3	0.853	5.323	67.626	21.775	3.884	0.151	0.347	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1383.40
26	0.7384	1170.2	1191.0	1187.3	0.854	5.395	67.517	21.753	3.932	0.154	0.354	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1382.71
27	0.7344	1169.1	1189.8	1186.0	0.850	5.096	68.094	21.714	3.732	0.145	0.331	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1385.13
28	0.7353	1170.3	1191.0	1187.2	0.870	5.079	68.018	21.735	3.766	0.147	0.343	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1385.63
29	0.7330	1169.2	1189.9	1186.2	0.871	4.926	68.358	21.683	3.652	0.143	0.328	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1386.54
30	0.7324	1168.6	1189.3	1185.6	0.875	4.905	68.462	21.605	3.643	0.143	0.328	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1386.36
Avg	0.7332	1168.0	1188.8	1185.1	0.869	5.013	68.329	21.579	3.712	0.141	0.320	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1385.11

Zone 262

Gas Composition and Properties

Effective June 1, 2017 09:00 - January 18, 2038 21:14

Attachment B
Page 7 of 21

Source #: 2501030
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.1461		0.3331
Nitrogen, N2	3.0665		4.4502
Methane, C1	78.9613		65.6229
Ethane, C2	15.4034	4.1206	23.9941
Propane, C3	2.2806	0.6265	5.2097
iso-Butane, iC4	0.0640	0.0209	0.1927
n-Butane, nC4	0.0500	0.0157	0.1506
iso-Pentane, iC5	0.0000	0.0000	0.0000
n-Pentane, nC5	0.0000	0.0000	0.0000
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0000	0.0000	0.0000
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2	0.0282		0.0467
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure		
Cricondenthern		
HV, Dry @ Base P, T	1134.86	
HV, Sat @ Base P, T	1115.11	
HV, Sat @ Sample P, T	1134.86	
Relative Density	0.6671	

C6+: 100

Totals 100.0001 4.7840 100.0000

Sample

Date: 06/30/2017 Pressure: 725.0
 Type: Composite Temperature: 0.0
 Tech: ES H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 07/03/2017 Instrument: WBI- 144
 Cylinder: 452

Tech: MB

Remarks:

Zone 2b3

Gas Composition and Properties

Effective June 1, 2017 09:00 - January 18, 2038 21:14

Source #: 3002013
Name: EPPING BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.7083		1.6053
Nitrogen, N2	2.7002		3.8954
Methane, C1	78.0915		64.5152
Ethane, C2	16.8101	4.4970	26.0301
Propane, C3	1.5253	0.4190	3.4637
iso-Butane, iC4	0.0471	0.0154	0.1410
n-Butane, nC4	0.0950	0.0299	0.2843
iso-Pentane, iC5	0.0065	0.0024	0.0242
n-Pentane, nC5	0.0069	0.0025	0.0256
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0000	0.0000	0.0000
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2	0.0092		0.0152
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure		
Cricondentherm		
HV, Dry @ Base P, T	1133.40	
HV, Sat @ Base P, T	1113.67	
HV, Sat @ Sample P, T	1133.40	
Relative Density	0.6710	

C6+: 100

Totals 100.0001 4.9650 100.0000

Sample

Date: 06/30/2017 Pressure: 560.0
Type: Composite Temperature: 0.0
Tech: ES H2O: lbs/mm
H2S: ppm

Remarks:

Analysis

Date: 07/03/2017 Instrument: WBI- 143
Cylinder: 349

Tech: MB

Remarks:

Zone 264

Source Daily Summary

June 2017

Number: 603

Pressure Base: 14.730

Contract Day: 1

Name: TIOGA STN-COUNTY LINE PLANT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7069	1159.8	1180.3	1180.0	0.905	3.078	71.842	21.350	2.567	0.079	0.157	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1401.39
2	0.7071	1160.2	1180.7	1180.0	0.905	3.078	71.842	21.350	2.567	0.079	0.157	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1401.39
3	0.7078	1160.6	1181.2	1180.0	0.905	3.078	71.842	21.350	2.567	0.079	0.157	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1401.39
4	0.7083	1161.0	1181.6	1180.0	0.905	3.078	71.842	21.350	2.567	0.079	0.157	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1401.39
5	0.7084	1161.4	1182.0	1180.0	0.905	3.078	71.842	21.350	2.567	0.079	0.157	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1401.39
6	0.7086	1161.8	1182.4	1176.6	0.838	3.106	72.425	20.735	2.661	0.075	0.140	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1400.23
7	0.7092	1163.1	1183.7	1179.5	0.874	3.051	71.985	21.306	2.538	0.077	0.149	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1401.91
8	0.7090	1162.9	1183.5	1180.1	0.882	3.046	71.867	21.466	2.487	0.075	0.151	0.011	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1402.16
9	0.7068	1159.2	1179.8	1176.5	0.868	3.081	72.289	21.017	2.494	0.077	0.152	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1399.98
10	0.7085	1162.2	1182.8	1179.4	0.867	3.061	72.091	21.121	2.588	0.083	0.164	0.011	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1401.86
11	0.7082	1161.3	1181.9	1178.6	0.876	3.073	71.966	21.382	2.467	0.074	0.144	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1401.14
12	0.7072	1159.2	1179.7	1176.3	0.884	3.096	72.176	21.157	2.441	0.074	0.148	0.010	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1399.51
13	0.7061	1157.7	1178.3	1175.0	0.883	3.082	72.296	21.124	2.384	0.073	0.140	0.008	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1398.90
14	0.7061	1158.6	1179.1	1175.7	0.859	3.072	72.336	21.077	2.414	0.074	0.150	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1399.83
15	0.7087	1162.9	1183.5	1180.2	0.846	3.065	71.937	21.373	2.529	0.075	0.153	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1402.58
16	0.7073	1161.5	1182.0	1178.7	0.816	3.069	72.286	20.940	2.636	0.079	0.156	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1402.21
17	0.7085	1162.8	1183.4	1180.0	0.863	3.037	71.960	21.398	2.480	0.079	0.159	0.011	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1402.51
18	0.7076	1161.5	1182.1	1178.8	0.858	3.029	72.054	21.393	2.419	0.076	0.150	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1401.99
19	0.7062	1159.1	1179.6	1176.3	0.852	3.055	72.342	21.066	2.441	0.076	0.148	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1400.46
20	0.7068	1159.7	1180.3	1176.8	0.857	3.064	72.224	21.209	2.393	0.076	0.151	0.011	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1400.53
21	0.7080	1161.9	1182.4	1179.1	0.848	3.069	71.982	21.394	2.460	0.077	0.150	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1401.94
22	0.7066	1159.6	1180.1	1176.9	0.852	3.066	72.123	21.396	2.321	0.076	0.147	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1400.65
23	0.7080	1161.7	1182.3	1178.9	0.865	3.054	71.938	21.536	2.343	0.078	0.160	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1401.67
24	0.7075	1161.1	1181.7	1178.3	0.857	3.055	72.039	21.427	2.353	0.080	0.163	0.011	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1401.48
25	0.7073	1160.1	1180.6	1177.3	0.847	3.108	72.166	21.162	2.449	0.082	0.164	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1400.50
26	0.7072	1160.0	1180.5	1177.2	0.848	3.104	72.322	20.903	2.524	0.088	0.182	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1400.47
27	0.7070	1159.8	1180.3	1176.8	0.847	3.096	72.440	20.760	2.550	0.089	0.185	0.014	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1400.32
28	0.7069	1160.6	1181.1	1177.7	0.844	3.052	72.196	21.247	2.387	0.082	0.167	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1401.41
29	0.7055	1158.1	1178.6	1175.2	0.847	3.062	72.437	21.042	2.350	0.080	0.160	0.010	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1399.83
30	0.7054	1157.8	1178.3	1175.0	0.834	3.084	72.469	20.955	2.403	0.079	0.155	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1399.71
Avg	0.7074	1161.0	1181.1	1178.0	0.865	3.071	72.118	21.211	2.478	0.078	0.156	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1401.02

Zone 2b5

Source Daily Summary

June 2017

Number: 043

Pressure Base: 14.730

Contract Day: 1

Name: BISMARCK STN-CLEVELAND STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7313	1168.6	1189.3	1184.9	0.847	4.848	68.963	20.880	3.984	0.135	0.304	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1387.22	
2	0.7312	1166.2	1186.9	1182.4	0.849	4.974	68.754	21.235	3.671	0.143	0.329	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1384.54	
3	0.7324	1167.4	1188.1	1183.7	0.852	5.016	68.488	21.453	3.675	0.144	0.329	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1384.79	
4	0.7330	1167.0	1187.7	1183.3	0.855	5.086	68.381	21.479	3.678	0.145	0.333	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1383.82	
5	0.7319	1166.0	1186.6	1182.3	0.854	5.046	68.604	21.309	3.668	0.144	0.331	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1383.63	
6	0.7318	1166.0	1186.6	1182.5	0.851	5.040	68.562	21.401	3.639	0.142	0.323	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1383.77	
7	0.7304	1166.4	1187.1	1182.8	0.860	4.875	68.729	21.524	3.524	0.136	0.311	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1385.53	
8	0.7307	1167.0	1187.6	1183.4	0.869	4.850	68.698	21.553	3.543	0.135	0.311	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1385.99	
9	0.7311	1164.9	1185.6	1181.0	0.869	5.012	68.705	21.300	3.609	0.139	0.323	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1383.14	
10	0.7315	1166.8	1187.4	1183.1	0.858	4.955	68.659	21.367	3.650	0.142	0.326	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1384.94	
11	0.7308	1166.4	1187.1	1182.7	0.860	4.909	68.724	21.430	3.579	0.137	0.317	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1385.16	
12	0.7296	1166.1	1186.7	1182.4	0.865	4.812	68.905	21.388	3.557	0.132	0.302	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1385.89	
13	0.7323	1167.5	1188.2	1183.9	0.864	4.980	68.572	21.341	3.736	0.140	0.323	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1385.03	
14	0.7293	1165.7	1186.3	1181.9	0.860	4.810	68.986	21.311	3.551	0.134	0.306	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1385.74	
15	0.7309	1167.7	1188.4	1184.1	0.861	4.844	68.662	21.563	3.590	0.134	0.306	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1386.60	
16	0.7323	1169.2	1189.9	1185.6	0.859	4.879	68.575	21.461	3.718	0.141	0.323	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1387.10	
17	0.7313	1168.0	1188.6	1184.4	0.852	4.871	68.675	21.458	3.649	0.138	0.315	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1386.59	
18	0.7311	1168.1	1188.8	1184.5	0.859	4.833	68.693	21.514	3.605	0.137	0.316	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1386.95	
19	0.7308	1167.5	1188.2	1184.0	0.853	4.849	68.743	21.452	3.609	0.137	0.315	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1386.54	
20	0.7313	1167.0	1187.7	1183.5	0.855	4.927	68.706	21.345	3.659	0.140	0.323	0.021	0.024	0.000	0.000	0.000	0.000	0.000	1385.40	
21	0.7379	1169.7	1190.4	1186.3	0.856	5.376	67.697	21.563	3.946	0.154	0.361	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1382.45	
22	0.7403	1171.3	1192.0	1187.7	0.856	5.515	67.320	21.674	4.051	0.159	0.375	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1381.94	
23	0.7411	1171.8	1192.6	1188.2	0.854	5.554	67.163	21.788	4.055	0.160	0.376	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1381.92	
24	0.7371	1170.5	1191.3	1187.0	0.858	5.251	67.764	21.716	3.860	0.151	0.352	0.022	0.024	0.000	0.000	0.000	0.000	0.000	1384.13	
25	0.7315	1168.0	1188.6	1184.3	0.857	4.890	68.640	21.477	3.624	0.141	0.326	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1386.29	
26	0.7315	1168.4	1189.1	1184.8	0.853	4.865	68.669	21.451	3.652	0.141	0.326	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1386.88	
27	0.7318	1168.9	1189.6	1185.3	0.851	4.861	68.774	21.246	3.723	0.148	0.348	0.023	0.026	0.000	0.000	0.000	0.000	0.000	1387.17	
28	0.7312	1168.2	1188.8	1184.8	0.851	4.858	68.684	21.479	3.620	0.141	0.324	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1386.85	
29	0.7309	1168.4	1189.1	1184.9	0.856	4.802	68.733	21.525	3.573	0.141	0.326	0.021	0.024	0.000	0.000	0.000	0.000	0.000	1387.46	
30	0.7295	1166.8	1187.4	1183.2	0.847	4.782	68.951	21.375	3.553	0.137	0.313	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1386.89	
Avg	0.7323	1168.0	1188.4	1184.1	0.856	4.972	68.539	21.435	3.685	0.142	0.326	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1385.35	

Zone 271

Source Daily Summary

June 2017

Number: 063

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND STN-MAPLETON

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7337	1170.2	1190.9	1187.7	0.864	4.945	68.376	21.451	3.887	0.135	0.302	0.020	0.021	0.000					1386.96	
2	0.7315	1167.9	1188.6	1185.2	0.858	4.892	68.817	21.074	3.885	0.133	0.297	0.021	0.023	0.000					1386.23	
3	0.7322	1166.5	1187.2	1183.9	0.861	5.032	68.488	21.463	3.654	0.141	0.316	0.021	0.023	0.000					1384.01	
4	0.7333	1167.1	1187.8	1184.5	0.861	5.098	68.306	21.534	3.690	0.144	0.322	0.021	0.022	0.000					1383.71	
5	0.7340	1166.9	1187.6	1184.3	0.863	5.169	68.169	21.597	3.688	0.144	0.326	0.021	0.023	0.000					1382.85	
6	0.7331	1166.2	1186.8	1183.5	0.863	5.133	68.366	21.439	3.685	0.144	0.325	0.022	0.024	0.000					1382.73	
7	0.7326	1165.4	1186.0	1182.7	0.861	5.135	68.400	21.449	3.653	0.141	0.317	0.021	0.022	0.000					1382.33	
8	0.7316	1166.0	1186.7	1183.4	0.870	4.993	68.507	21.588	3.553	0.137	0.308	0.021	0.023	0.000					1383.99	
9	0.7316	1166.8	1187.5	1184.3	0.879	4.936	68.491	21.647	3.565	0.135	0.305	0.020	0.022	0.000					1384.96	
10	0.7322	1165.5	1186.1	1182.8	0.877	5.074	68.469	21.457	3.621	0.140	0.317	0.022	0.024	0.000					1382.75	
11	0.7321	1166.1	1186.7	1183.4	0.865	5.049	68.521	21.398	3.662	0.142	0.319	0.021	0.023	0.000					1383.53	
12	0.7304	1165.3	1186.0	1178.6	0.868	4.922	68.734	21.463	3.534	0.134	0.303	0.020	0.022	0.000					1384.32	
13	0.7308	1163.6	1184.2	1180.9	0.872	5.065	68.598	21.453	3.542	0.132	0.297	0.020	0.022	0.000					1381.88	
14	0.7310	1165.2	1185.8	1182.5	0.871	4.982	68.628	21.470	3.571	0.134	0.302	0.020	0.022	0.000					1383.61	
15	0.7315	1166.1	1186.8	1183.4	0.875	4.971	68.612	21.410	3.651	0.135	0.303	0.020	0.022	0.000					1384.17	
16	0.7314	1166.6	1187.3	1183.9	0.870	4.939	68.571	21.545	3.596	0.135	0.302	0.020	0.022	0.000					1384.87	
17	0.7328	1168.3	1189.0	1185.7	0.870	4.969	68.416	21.550	3.700	0.139	0.312	0.021	0.023	0.000					1385.54	
18	0.7321	1167.3	1188.0	1184.7	0.861	4.976	68.527	21.458	3.685	0.139	0.311	0.021	0.022	0.000					1385.05	
19	0.7316	1167.5	1188.1	1184.8	0.863	4.914	68.564	21.560	3.612	0.137	0.307	0.021	0.022	0.000					1385.72	
20	0.7318	1167.2	1187.8	1184.5	0.864	4.952	68.537	21.526	3.632	0.138	0.310	0.021	0.022	0.000					1385.16	
21	0.7316	1165.9	1186.5	1183.2	0.865	5.007	68.617	21.357	3.657	0.139	0.313	0.021	0.023	0.000					1383.84	
22	0.7367	1168.4	1189.1	1185.7	0.866	5.332	67.799	21.618	3.849	0.148	0.339	0.023	0.025	0.000					1381.98	
23	0.7418	1170.6	1191.3	1187.9	0.866	5.677	67.062	21.711	4.100	0.161	0.372	0.025	0.026	0.000					1379.79	
24	0.7405	1170.5	1191.3	1187.8	0.864	5.567	67.218	21.765	4.018	0.158	0.361	0.024	0.026	0.000					1380.88	
25	0.7384	1169.9	1190.6	1187.2	0.867	5.403	67.516	21.762	3.903	0.153	0.348	0.023	0.025	0.000					1382.12	
26	0.7332	1167.5	1188.1	1184.8	0.866	5.063	68.333	21.548	3.680	0.143	0.323	0.022	0.023	0.000					1384.16	
27	0.7324	1168.0	1188.7	1185.3	0.862	4.965	68.502	21.474	3.686	0.143	0.323	0.022	0.024	0.000					1385.52	
28	0.7321	1167.6	1188.3	1184.9	0.859	4.961	68.616	21.336	3.706	0.145	0.328	0.023	0.027	0.000					1385.38	
29	0.7325	1168.1	1188.8	1185.4	0.861	4.969	68.441	21.570	3.652	0.142	0.320	0.022	0.024	0.000					1385.53	
30	0.7313	1167.5	1188.2	1184.8	0.863	4.885	68.625	21.549	3.577	0.140	0.316	0.021	0.024	0.000					1386.02	
Avg	0.7331	1167.0	1187.9	1184.4	0.866	5.066	68.361	21.507	3.696	0.141	0.318	0.021	0.023	0.000					1383.99	

Zone 272

Source Daily Summary

June 2017

Number: 061

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND STN-GRAFTON BDR

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7328	1170.4	1191.2	1188.0	0.859	4.847	68.622	21.268	3.928	0.135	0.299	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1388.14
2	0.7315	1166.8	1187.4	1184.2	0.861	4.947	68.734	21.206	3.763	0.138	0.308	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1385.00
3	0.7329	1168.0	1188.7	1185.5	0.860	5.013	68.419	21.492	3.703	0.145	0.324	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1385.05
4	0.7334	1167.0	1187.7	1184.5	0.862	5.110	68.257	21.603	3.663	0.143	0.320	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1383.52
5	0.7337	1167.7	1188.3	1185.0	0.864	5.095	68.261	21.571	3.691	0.145	0.327	0.022	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1383.97
6	0.7323	1165.5	1186.2	1183.0	0.859	5.103	68.499	21.348	3.685	0.143	0.320	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1382.77
7	0.7322	1166.4	1187.1	1183.9	0.863	5.035	68.438	21.561	3.603	0.140	0.315	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1383.89
8	0.7309	1166.8	1187.5	1184.4	0.876	4.873	68.618	21.617	3.538	0.135	0.302	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1385.60
9	0.7313	1167.1	1187.8	1184.7	0.875	4.888	68.582	21.609	3.561	0.135	0.305	0.022	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1385.63
10	0.7325	1165.3	1185.9	1182.8	0.868	5.124	68.457	21.368	3.674	0.143	0.322	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1382.29
11	0.7319	1167.2	1187.8	1184.7	0.868	4.954	68.542	21.509	3.626	0.140	0.315	0.021	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1385.07
12	0.7298	1165.5	1186.1	1179.7	0.870	4.856	68.818	21.472	3.510	0.132	0.299	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1385.04
13	0.7315	1167.2	1187.9	1184.0	0.876	4.897	68.641	21.432	3.673	0.135	0.303	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1385.61
14	0.7319	1167.0	1187.7	1183.4	0.869	4.960	68.564	21.450	3.666	0.138	0.311	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1384.92
15	0.7311	1167.2	1187.8	1184.7	0.872	4.875	68.617	21.583	3.577	0.134	0.301	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1385.79
16	0.7328	1169.3	1190.0	1186.8	0.871	4.904	68.411	21.641	3.680	0.138	0.311	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1386.71
17	0.7321	1168.2	1188.9	1185.7	0.858	4.930	68.544	21.472	3.704	0.139	0.311	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1386.04
18	0.7320	1168.3	1189.0	1185.8	0.869	4.890	68.525	21.591	3.632	0.138	0.311	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1386.36
19	0.7318	1168.1	1188.8	1185.3	0.864	4.891	68.547	21.589	3.620	0.137	0.309	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1386.28
20	0.7316	1167.3	1188.0	1184.8	0.864	4.922	68.621	21.441	3.657	0.139	0.312	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1385.54
21	0.7341	1168.3	1189.0	1185.7	0.864	5.100	68.208	21.575	3.739	0.143	0.324	0.022	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1384.28
22	0.7425	1171.4	1192.2	1188.9	0.866	5.695	66.974	21.720	4.152	0.164	0.378	0.025	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1380.11
23	0.7408	1171.3	1192.1	1188.8	0.863	5.542	67.208	21.763	4.050	0.159	0.364	0.024	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1381.61
24	0.7391	1170.8	1191.6	1188.3	0.864	5.414	67.434	21.789	3.944	0.155	0.353	0.023	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1382.56
25	0.7343	1168.8	1189.5	1186.3	0.867	5.075	68.174	21.648	3.717	0.145	0.328	0.022	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1384.80
26	0.7330	1168.9	1189.6	1186.4	0.860	4.963	68.412	21.547	3.704	0.144	0.325	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1386.10
27	0.7325	1169.0	1189.7	1186.2	0.859	4.910	68.624	21.328	3.740	0.149	0.339	0.024	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1386.66
28	0.7321	1168.5	1189.2	1185.9	0.859	4.908	68.540	21.531	3.656	0.141	0.320	0.021	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1386.40
29	0.7321	1168.9	1189.6	1186.3	0.862	4.873	68.521	21.618	3.617	0.142	0.321	0.022	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1386.98
30	0.7302	1167.0	1187.7	1184.5	0.859	4.814	68.807	21.485	3.548	0.137	0.308	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1386.52
Avg	0.7330	1168.0	1188.7	1185.3	0.865	5.014	68.387	21.528	3.701	0.142	0.319	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1384.97

Zone 273

Source Daily Summary

June 2017

Number: 041

Pressure Base: 14.730

Contract Day: 1

Name: BISMARCK STN-GLEN ULLIN STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7313	1168.4	1189.1	1185.1	0.849	4.847	68.967	20.884	3.972	0.135	0.305	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1387.12	
2	0.7311	1166.0	1186.7	1182.7	0.849	4.973	68.767	21.233	3.664	0.142	0.328	0.021	0.024	0.000	0.000	0.000	0.000	0.000	1384.47	
3	0.7324	1167.4	1188.1	1184.2	0.852	5.012	68.495	21.446	3.679	0.145	0.329	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1384.86	
4	0.7329	1166.9	1187.5	1183.5	0.854	5.084	68.401	21.466	3.676	0.144	0.332	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1383.78	
5	0.7320	1166.2	1186.8	1182.8	0.854	5.044	68.589	21.322	3.670	0.144	0.332	0.021	0.024	0.000	0.000	0.000	0.000	0.000	1383.76	
6	0.7318	1166.0	1186.6	1182.8	0.851	5.041	68.567	21.394	3.640	0.141	0.323	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1383.75	
7	0.7305	1166.3	1186.9	1183.1	0.859	4.891	68.711	21.522	3.526	0.136	0.312	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1385.29	
8	0.7306	1166.8	1187.5	1183.6	0.867	4.852	68.719	21.534	3.540	0.135	0.311	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1385.88	
9	0.7309	1164.8	1185.5	1181.3	0.868	5.006	68.723	21.296	3.602	0.139	0.322	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1383.15	
10	0.7314	1166.6	1187.2	1183.3	0.859	4.955	68.680	21.351	3.645	0.141	0.326	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1384.81	
11	0.7308	1166.5	1187.1	1183.1	0.859	4.911	68.723	21.424	3.583	0.138	0.318	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1385.17	
12	0.7295	1165.9	1186.6	1182.6	0.864	4.808	68.910	21.415	3.531	0.131	0.300	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1385.85	
13	0.7323	1167.5	1188.2	1184.3	0.866	4.975	68.604	21.297	3.750	0.140	0.324	0.021	0.024	0.000	0.000	0.000	0.000	0.000	1385.02	
14	0.7294	1165.7	1186.4	1182.5	0.860	4.820	68.965	21.314	3.559	0.134	0.306	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1385.68	
15	0.7309	1167.6	1188.3	1184.4	0.861	4.843	68.672	21.557	3.587	0.134	0.306	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1386.57	
16	0.7322	1169.1	1189.8	1185.9	0.859	4.882	68.585	21.452	3.714	0.141	0.323	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1386.98	
17	0.7314	1168.1	1188.8	1185.0	0.852	4.871	68.661	21.470	3.650	0.138	0.316	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1386.66	
18	0.7310	1168.0	1188.7	1184.8	0.858	4.835	68.706	21.498	3.605	0.137	0.317	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1386.87	
19	0.7307	1167.4	1188.0	1184.1	0.853	4.852	68.758	21.429	3.613	0.137	0.315	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1386.42	
20	0.7313	1167.0	1187.7	1183.7	0.855	4.927	68.706	21.345	3.659	0.140	0.322	0.021	0.024	0.000	0.000	0.000	0.000	0.000	1385.40	
21	0.7379	1169.7	1190.4	1186.4	0.856	5.376	67.697	21.563	3.946	0.154	0.361	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1382.44	
22	0.7403	1171.3	1192.0	1188.1	0.856	5.515	67.320	21.674	4.051	0.159	0.375	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1381.93	
23	0.7411	1171.8	1192.6	1188.8	0.854	5.554	67.163	21.788	4.055	0.160	0.376	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1381.91	
24	0.7371	1170.5	1191.3	1187.5	0.858	5.251	67.764	21.716	3.860	0.151	0.352	0.022	0.024	0.000	0.000	0.000	0.000	0.000	1384.13	
25	0.7314	1167.7	1188.4	1184.6	0.857	4.886	68.671	21.459	3.618	0.141	0.325	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1386.20	
26	0.7316	1168.4	1189.1	1185.2	0.853	4.871	68.665	21.441	3.657	0.142	0.327	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1386.80	
27	0.7316	1168.7	1189.4	1185.3	0.851	4.859	68.782	21.254	3.715	0.147	0.343	0.023	0.026	0.000	0.000	0.000	0.000	0.000	1387.09	
28	0.7312	1168.1	1188.8	1184.9	0.851	4.861	68.693	21.459	3.626	0.141	0.325	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1386.79	
29	0.7309	1168.4	1189.1	1185.2	0.855	4.804	68.732	21.523	3.574	0.141	0.326	0.021	0.024	0.000	0.000	0.000	0.000	0.000	1387.44	
30	0.7294	1166.6	1187.3	1183.5	0.847	4.782	68.966	21.364	3.550	0.137	0.313	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1386.82	
Avg	0.7322	1168.0	1188.3	1184.4	0.856	4.973	68.545	21.430	3.684	0.141	0.326	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1385.30	

Zone 28

Source Daily Summary

June 2017

Number: 271

Pressure Base: 14.730

Contract Day: 1

Name: DCKSN BRD-BLFD TSF-G.U. STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6806	1145.5	1165.7	1161.6	0.081	2.674	74.812	21.529	0.881	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1409.71
2	0.6836	1150.4	1170.8	1166.8	0.027	2.730	74.144	22.201	0.879	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.77
3	0.6840	1151.1	1171.5	1167.5	0.014	2.752	73.997	22.373	0.846	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.14
4	0.6838	1150.0	1170.4	1166.1	0.030	2.765	74.119	22.172	0.893	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.12
5	0.6779	1141.0	1161.2	1157.2	0.137	2.600	75.482	20.840	0.910	0.012	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1407.10
6	0.6846	1151.4	1171.8	1168.1	0.037	2.749	74.086	22.094	1.008	0.011	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.94
7	0.6871	1155.2	1175.6	1171.8	0.002	2.804	73.618	22.499	1.026	0.015	0.030	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1414.99
8	0.6802	1144.3	1164.6	1160.5	0.082	2.698	74.855	21.520	0.817	0.010	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1408.79
9	0.7075	1152.4	1172.8	1168.5	0.561	4.037	71.804	20.790	2.500	0.086	0.197	0.012	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1391.44
10	0.7285	1161.1	1181.7	1177.8	0.859	5.015	69.123	20.934	3.582	0.133	0.312	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1381.23
11	0.7277	1162.0	1182.5	1178.8	0.869	4.880	69.223	21.018	3.537	0.130	0.303	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1382.94
12	0.7283	1161.0	1181.5	1177.8	0.873	4.983	69.138	20.977	3.548	0.130	0.308	0.020	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1381.26
13	0.6996	1153.7	1174.1	1170.6	0.302	3.613	72.253	21.865	1.782	0.052	0.117	0.007	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1400.80
14	0.6841	1149.7	1170.1	1166.7	0.000	2.859	73.892	22.454	0.780	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.45
15	0.6839	1148.7	1169.1	1165.6	0.000	2.905	73.932	22.351	0.796	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1410.39
16	0.6843	1149.5	1169.8	1166.3	0.000	2.896	73.858	22.437	0.791	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1410.89
17	0.6844	1149.2	1169.6	1166.2	0.000	2.923	73.865	22.358	0.838	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1410.46
18	0.6931	1150.9	1171.2	1167.8	0.190	3.351	72.977	21.966	1.402	0.034	0.073	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1403.79
19	0.6900	1154.2	1174.6	1171.1	0.087	3.014	73.274	22.341	1.222	0.019	0.039	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1410.89
20	0.6853	1152.8	1173.2	1169.8	0.000	2.784	73.793	22.492	0.914	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.98
21	0.6818	1139.4	1159.6	1156.1	0.119	3.092	74.906	20.657	1.169	0.020	0.035	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1401.05
22	0.6843	1148.2	1168.5	1165.1	0.040	2.915	74.117	21.904	0.985	0.013	0.023	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1409.28
23	0.6856	1151.1	1171.5	1168.2	0.000	2.921	73.639	22.566	0.856	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.56
24	0.6832	1148.1	1168.4	1165.1	0.000	2.883	74.004	22.366	0.734	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1410.26
25	0.6844	1150.2	1170.6	1167.1	0.000	2.859	73.839	22.489	0.799	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.74
26	0.6855	1151.9	1172.2	1168.7	0.000	2.865	73.687	22.562	0.871	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.56
27	0.6859	1152.9	1173.4	1169.8	0.000	2.836	73.718	22.455	0.971	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.48
28	0.6861	1153.8	1174.2	1170.7	0.000	2.807	73.667	22.539	0.967	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.28
29	0.6852	1152.5	1172.9	1169.5	0.000	2.797	73.775	22.528	0.883	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.66
30	0.6837	1150.0	1170.3	1166.9	0.000	2.811	73.926	22.508	0.741	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.12
Avg	0.6901	1151.0	1171.4	1167.8	0.144	3.127	73.384	21.993	1.264	0.026	0.055	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1407.04

Zone 31

Source Daily Summary

June 2017

Number: 051 Pressure Base: 14.730 Contract Day: 1
 Name: CABIN CRK STN-BELFIELD TRSFR Temperature Base: Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6643	1085.6	1104.8	1101.6	0.582	4.013	79.773	13.587	1.847	0.065	0.120	0.008	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1352.33
2	0.6657	1090.6	1109.9	1107.0	0.609	3.799	79.651	13.779	1.970	0.064	0.116	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1357.13
3	0.6654	1089.1	1108.4	1105.5	0.612	3.850	79.647	13.800	1.899	0.064	0.115	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1355.67
4	0.6705	1095.8	1115.2	1112.1	0.569	3.992	78.840	14.257	2.095	0.079	0.149	0.010	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1358.70
5	0.6676	1090.7	1110.0	1107.0	0.564	4.041	79.138	14.151	1.896	0.069	0.126	0.008	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1355.31
6	0.6644	1091.0	1110.3	1107.3	0.632	3.615	79.762	14.036	1.771	0.060	0.111	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1358.98
7	0.6746	1108.2	1127.9	1124.7	0.459	3.788	77.452	16.353	1.777	0.055	0.103	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1369.99
8	0.6740	1107.1	1126.7	1123.5	0.464	3.797	77.592	16.187	1.781	0.058	0.108	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1369.14
9	0.6725	1100.3	1119.8	1116.5	0.520	3.985	78.182	15.132	1.972	0.068	0.126	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1362.23
10	0.6709	1096.2	1115.6	1112.3	0.546	4.042	78.545	14.668	1.987	0.068	0.128	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1358.81
11	0.6721	1098.8	1118.3	1115.0	0.549	3.992	78.264	15.020	1.983	0.062	0.116	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1360.85
12	0.6712	1097.4	1116.8	1113.5	0.550	3.988	78.388	14.978	1.901	0.063	0.118	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1360.02
13	0.6721	1101.9	1121.4	1118.1	0.491	3.891	77.981	15.699	1.762	0.057	0.106	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1364.63
14	0.6692	1093.6	1113.0	1109.7	0.549	4.037	78.723	14.635	1.872	0.060	0.110	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1357.33
15	0.6745	1102.5	1122.1	1118.0	0.547	3.992	78.115	14.831	2.320	0.064	0.118	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1363.01
16	0.6775	1112.7	1132.4	1129.1	0.463	3.777	77.207	16.278	2.095	0.058	0.109	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1372.59
17	0.6801	1129.2	1149.2	1145.8	0.229	3.381	75.588	19.362	1.333	0.034	0.064	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1390.29
18	0.6812	1134.1	1154.1	1150.7	0.191	3.253	75.214	20.015	1.234	0.030	0.056	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1395.08
19	0.6772	1117.0	1136.8	1133.0	0.365	3.641	76.728	17.437	1.668	0.051	0.097	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1378.16
20	0.6729	1102.4	1121.9	1117.5	0.507	3.911	77.952	15.578	1.862	0.062	0.115	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1364.50
21	0.6725	1103.4	1123.0	1118.8	0.498	3.824	77.999	15.669	1.826	0.060	0.112	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1366.18
22	0.6681	1092.5	1111.9	1108.3	0.525	4.029	78.947	14.447	1.858	0.063	0.116	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1357.16
23	0.6692	1095.2	1114.6	1111.1	0.566	3.911	78.850	14.569	1.894	0.065	0.126	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1359.28
24	0.6774	1119.3	1139.1	1135.6	0.349	3.549	76.602	17.724	1.636	0.044	0.084	0.006	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1380.73
25	0.6773	1124.6	1144.5	1141.0	0.283	3.315	76.238	18.710	1.353	0.033	0.060	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1387.47
26	0.6718	1100.4	1119.9	1116.5	0.518	3.906	78.339	15.035	2.020	0.059	0.109	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1363.20
27	0.6661	1093.1	1112.5	1108.8	0.579	3.725	79.476	14.136	1.894	0.061	0.114	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1359.91
28	0.6634	1087.4	1106.6	1103.5	0.562	3.849	79.853	13.774	1.786	0.058	0.106	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1355.49
29	0.6675	1092.1	1111.4	1107.9	0.541	3.984	78.996	14.494	1.806	0.058	0.107	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1357.12
30	0.6780	1125.3	1145.3	1141.8	0.289	3.329	76.141	18.747	1.385	0.036	0.065	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1387.58
Avg	0.6716	1103.0	1122.1	1118.7	0.490	3.807	78.139	15.570	1.816	0.058	0.107	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1365.96

Zone 32

Source Daily Summary

June 2017

Number: 111

Pressure Base: 14.730

Contract Day: 1

Name: LITTLE KNIFE PLANT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6877	1157.3	1177.8	1173.3	0.002	2.732	73.281	23.083	0.884	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.06
2	0.6873	1156.9	1177.4	1172.9	0.002	2.723	73.321	23.091	0.847	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.89
3	0.6877	1157.0	1177.5	1173.1	0.002	2.757	73.237	23.141	0.846	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.56
4	0.6880	1157.7	1178.2	1173.7	0.002	2.739	73.218	23.137	0.887	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.18
5	0.6882	1157.8	1178.3	1173.8	0.002	2.751	73.180	23.161	0.888	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.09
6	0.6906	1161.6	1182.2	1177.9	0.002	2.746	73.007	23.035	1.149	0.018	0.036	0.003	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1419.34
7	0.6881	1156.8	1177.2	1172.7	0.001	2.812	73.145	23.166	0.862	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.86
8	0.6879	1156.7	1177.2	1172.4	0.002	2.792	73.267	22.996	0.924	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.04
9	0.6877	1157.6	1178.1	1173.6	0.002	2.713	73.313	23.042	0.913	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.42
10	0.6875	1155.3	1175.8	1171.3	0.001	2.839	73.241	23.081	0.822	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.77
11	0.6869	1154.6	1175.1	1170.4	0.000	2.822	73.339	23.031	0.792	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.60
12	0.6872	1155.3	1175.8	1171.3	0.000	2.818	73.300	23.033	0.833	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.00
13	0.6859	1153.5	1173.9	1169.2	0.000	2.805	73.506	22.913	0.759	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.13
14	0.6863	1154.0	1174.4	1169.9	0.000	2.817	73.425	22.970	0.772	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.27
15	0.6874	1154.7	1175.1	1170.4	0.000	2.875	73.252	23.025	0.832	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.03
16	0.6863	1152.7	1173.1	1168.7	0.001	2.893	73.430	22.874	0.787	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.72
17	0.6861	1153.5	1173.9	1169.2	0.002	2.824	73.454	22.949	0.758	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.90
18	0.6877	1156.8	1177.3	1172.4	0.002	2.767	73.293	23.011	0.910	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.38
19	0.6884	1158.2	1178.7	1174.2	0.002	2.744	73.213	23.073	0.950	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.37
20	0.6882	1158.2	1178.7	1174.2	0.002	2.730	73.238	23.066	0.945	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.53
21	0.6885	1156.8	1177.3	1172.7	0.002	2.843	73.151	23.053	0.927	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.50
22	0.6879	1156.8	1177.3	1172.8	0.002	2.779	73.227	23.105	0.869	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.24
23	0.6875	1154.6	1175.0	1170.3	0.002	2.885	73.217	23.069	0.812	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.83
24	0.6873	1155.5	1176.0	1171.4	0.002	2.807	73.288	23.059	0.826	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.23
25	0.6878	1156.2	1176.7	1172.0	0.002	2.809	73.249	23.044	0.877	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.56
26	0.6880	1156.2	1176.6	1172.3	0.001	2.838	73.186	23.084	0.872	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.23
27	0.6886	1157.9	1178.4	1173.9	0.002	2.787	73.178	23.040	0.972	0.009	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.72
28	0.6884	1157.9	1178.4	1173.8	0.002	2.761	73.206	23.058	0.955	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.06
29	0.6873	1156.2	1176.7	1172.2	0.002	2.764	73.311	23.064	0.842	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.08
30	0.6889	1158.7	1179.2	1174.4	0.002	2.760	73.108	23.157	0.953	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.48
Avg	0.6877	1156.0	1176.9	1172.3	0.002	2.791	73.259	23.054	0.875	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.90

Zone 33

Gas Composition and Properties

Effective June 1, 2016 09:00 - January 18, 2038 21:14

Attachment B
Page 17 of 21

Source #: 1202160
Name: BOWMAN BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.2321		0.6048
Nitrogen, N2	3.4604		5.7399
Methane, C1	94.0188		89.3085
Ethane, C2	1.9955	0.5321	3.5530
Propane, C3	0.2261	0.0621	0.5904
iso-Butane, iC4	0.0203	0.0066	0.5904
n-Butane, nC4	0.0216	0.0068	0.0743
iso-Pentane, iC5	0.0028	0.0010	0.0120
n-Pentane, nC5	0.0020	0.0007	0.0085
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0000	0.0000	0.0000
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2	0.0204		
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure		
Cricondentherm		
HV, Dry @ Base P, T	996.12	
HV, Sat @ Base P, T	978.78	
HV, Sat @ Sample P, T	996.12	
Relative Density	0.5840	

C6+: 100

Totals 100.0000 0.6100 100.4818

Sample

Date: 07/01/2016 Pressure: 380.0
Type: Spot Temperature:
Tech: MG H2O: lbs/mm
H2S: ppm

Remarks:

Analysis

Date: 07/05/2016 Instrument: WBI- 447
Cylinder: 100
Tech: MB

Remarks: Inactive

Zone 34

Source Daily Summary

June 2017

Number: 471

Pressure Base: 14.730

Contract Day:

Name: SPRING CREEK I - SAX VALVE I

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6778	1110.1	1129.8	1126.9	1.010	3.146	76.192	18.789	0.840	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.11
2	0.6699	1096.7	1116.1	1113.3	1.020	3.207	77.531	17.654	0.573	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1360.49
3	0.6731	1102.2	1121.7	1118.8	1.019	3.179	76.968	18.150	0.669	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.02
4	0.6767	1109.4	1129.1	1126.2	1.007	3.094	76.249	18.945	0.694	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.34
5	0.6835	1120.0	1139.8	1136.9	0.994	3.102	75.359	19.339	1.188	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1375.53
6	0.6729	1101.7	1121.3	1118.4	1.002	3.206	76.941	18.221	0.616	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.75
7	0.6725	1100.9	1120.4	1117.5	1.000	3.230	76.883	18.382	0.496	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.03
8	0.6690	1095.8	1115.2	1112.4	0.993	3.224	77.615	17.633	0.522	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1360.26
9	0.6725	1100.2	1119.7	1116.8	1.005	3.260	76.902	18.314	0.511	0.003	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.23
10	0.6690	1095.0	1114.4	1111.6	1.010	3.244	77.458	17.923	0.358	0.003	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1359.33
11	0.6695	1097.9	1117.3	1114.5	1.029	3.090	77.396	18.123	0.354	0.003	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.33
12	0.6754	1110.1	1129.8	1126.8	1.006	2.932	76.486	18.992	0.524	0.014	0.037	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1371.43
13	0.6718	1108.0	1127.6	1124.7	1.012	2.714	76.838	19.206	0.227	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1372.50
14	0.6741	1109.7	1129.4	1126.5	1.013	2.820	76.845	18.631	0.656	0.011	0.022	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1372.34
15	0.6711	1099.7	1119.1	1116.3	1.014	3.145	77.188	18.173	0.465	0.006	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.01
16	0.6790	1113.7	1133.4	1130.5	1.002	3.059	75.810	19.395	0.717	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1372.27
17	0.6714	1103.1	1122.6	1119.8	1.015	2.967	77.113	18.465	0.424	0.006	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1366.91
18	0.6746	1108.5	1128.2	1125.3	1.014	2.935	76.550	18.976	0.507	0.006	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.42
19	0.6712	1100.2	1119.6	1116.8	1.018	3.124	77.117	18.305	0.422	0.005	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.47
20	0.6735	1104.9	1124.4	1121.6	1.013	3.054	77.134	17.891	0.889	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1366.99
21	0.6702	1098.8	1118.3	1115.4	1.016	3.117	77.285	18.170	0.403	0.003	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.77
22	0.6733	1105.1	1124.7	1121.9	1.004	3.033	77.159	17.902	0.888	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.52
23	0.6724	1101.7	1121.2	1118.3	1.023	3.135	77.000	18.311	0.500	0.009	0.020	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1364.12
24	0.6721	1100.5	1120.0	1117.1	1.027	3.176	77.000	18.294	0.484	0.006	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.93
25	0.6869	1128.8	1148.8	1145.9	0.984	2.904	74.201	21.201	0.684	0.009	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1382.91
26	0.6842	1122.9	1142.8	1139.8	0.989	3.008	74.603	20.816	0.561	0.008	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1378.31
27	0.6687	1094.8	1114.2	1111.3	1.022	3.213	77.648	17.649	0.449	0.007	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1359.31
28	0.6736	1105.5	1125.0	1122.1	1.017	3.026	77.428	17.421	0.983	0.037	0.081	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1367.30
29	0.6873	1129.6	1149.6	1146.6	0.991	2.885	74.104	21.328	0.677	0.006	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1383.44
30	0.6862	1125.3	1145.3	1142.4	0.983	3.058	74.269	20.998	0.682	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1379.30
Avg	0.6748	1107.0	1126.3	1123.4	1.008	3.076	76.576	18.720	0.599	0.007	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.89

Zone 43

Alliance Pipeline

DAILY ANALYSIS --- USA
 ND07MD1 --- Hankinson Sales
 June 2017

DAY	Heating Value (BTU/ft3)	Relative Density	C1 Mol%	C2 Mol%	C3 Mol%	IC4 Mol%	NC4 Mol%	IC5 Mol%	NC5 Mol%	C6+ Mol%	N2 Mol%	CO2 Mol%	Hel Mol%
1	1,148.515	0.6619	84.7060	8.5746	3.6899	0.3822	0.6906	0.0774	0.0664	0.0353	1.2913	0.4753	0.0111
2	1,145.661	0.6607	84.7334	8.5972	3.6580	0.3651	0.6577	0.0680	0.0574	0.0283	1.3367	0.4863	0.0118
3	1,145.388	0.6601	84.8045	8.5994	3.6076	0.3685	0.6610	0.0683	0.0578	0.0283	1.3182	0.4746	0.0119
4	1,143.927	0.6594	84.8762	8.5728	3.5667	0.3618	0.6531	0.0663	0.0563	0.0272	1.3306	0.4771	0.0120
5	1,144.960	0.6597	84.8135	8.6575	3.6063	0.3557	0.6346	0.0660	0.0561	0.0267	1.2786	0.4929	0.0121
6	1,145.262	0.6595	84.8862	8.6011	3.6053	0.3644	0.6324	0.0704	0.0594	0.0283	1.2632	0.4779	0.0115
7	1,145.476	0.6599	84.8258	8.6217	3.6187	0.3676	0.6276	0.0718	0.0607	0.0296	1.2919	0.4731	0.0116
8	1,145.632	0.6608	84.6709	8.6784	3.6360	0.3672	0.6379	0.0717	0.0605	0.0290	1.3542	0.4825	0.0119
9	1,146.065	0.6613	84.6498	8.6592	3.6712	0.3714	0.6347	0.0738	0.0624	0.0268	1.3139	0.5243	0.0126
10	1,142.946	0.6593	84.9313	8.5084	3.5880	0.3589	0.6156	0.0724	0.0606	0.0266	1.2771	0.5486	0.0124
11	1,144.832	0.6600	84.7389	8.7349	3.6161	0.3539	0.6073	0.0674	0.0560	0.0247	1.2596	0.5280	0.0131
12	1,138.673	0.6554	85.2266	8.6279	3.4312	0.3202	0.5181	0.0629	0.0519	0.0225	1.1936	0.5324	0.0128
13	1,139.725	0.6552	85.2192	8.7295	3.4169	0.3188	0.5063	0.0634	0.0526	0.0238	1.1538	0.5031	0.0127
14	1,143.340	0.6588	84.7640	8.8503	3.5743	0.3327	0.5530	0.0639	0.0526	0.0252	1.2533	0.5183	0.0124
15	1,145.053	0.6608	84.5328	8.8688	3.6676	0.3438	0.5845	0.0642	0.0529	0.0238	1.3193	0.5300	0.0123
16	1,145.562	0.6622	84.2563	9.0931	3.6721	0.3360	0.5788	0.0602	0.0493	0.0228	1.3326	0.5859	0.0129
17	1,146.140	0.6674	83.4075	9.4471	3.7960	0.3296	0.5750	0.0612	0.0495	0.0231	1.5529	0.7438	0.0142
18	1,142.775	0.6661	83.5477	9.3732	3.7042	0.3179	0.5556	0.0593	0.0481	0.0237	1.5801	0.7759	0.0144
19	1,142.545	0.6660	83.5814	9.3070	3.7110	0.3205	0.5701	0.0582	0.0473	0.0226	1.5981	0.7694	0.0145
20	1,141.379	0.6643	83.9048	9.0415	3.7056	0.3263	0.5746	0.0593	0.0488	0.0221	1.5770	0.7259	0.0139
21	1,147.821	0.6655	83.7434	9.2731	3.8189	0.3393	0.5873	0.0609	0.0511	0.0236	1.4936	0.5963	0.0125
22	1,152.488	0.6684	83.3999	9.3862	3.9854	0.3622	0.6322	0.0587	0.0479	0.0214	1.5089	0.5847	0.0124
23	1,154.929	0.6687	83.3266	9.5665	3.9532	0.3708	0.6400	0.0607	0.0502	0.0230	1.4676	0.5293	0.0122
24	1,153.867	0.6676	83.4856	9.4700	3.9642	0.3598	0.6085	0.0612	0.0512	0.0251	1.4376	0.5245	0.0123
25	1,158.382	0.6698	83.3407	9.4646	4.0822	0.3868	0.6620	0.0664	0.0557	0.0259	1.3886	0.5150	0.0121
26	1,158.654	0.6702	83.3069	9.4591	4.0909	0.3896	0.6670	0.0684	0.0574	0.0276	1.4033	0.5173	0.0124
27	1,156.213	0.6687	83.5045	9.3501	4.0274	0.3806	0.6513	0.0673	0.0561	0.0282	1.3975	0.5245	0.0125
28	1,156.227	0.6686	83.5267	9.3515	3.9941	0.3841	0.6610	0.0688	0.0577	0.0292	1.3964	0.5180	0.0125
29	1,154.989	0.6680	83.5573	9.3476	3.9744	0.3753	0.6401	0.0686	0.0577	0.0294	1.4174	0.5198	0.0124
30	1,154.958	0.6674	83.6371	9.3523	3.9481	0.3717	0.6424	0.0671	0.0565	0.0271	1.3722	0.5130	0.0125
Volume	1,147.533	0.6632	84.2204	8.9921	3.7385	0.3557	0.6149	0.0659	0.0550	0.0261	1.3699	0.5491	0.0125
Weight Avg Energy	1,147.558	0.6632	84.2182	8.9932	3.7393	0.3558	0.6150	0.0659	0.0550	0.0261	1.3701	0.5490	0.0125

Zone 1660

Watford City

01325

Watford City West Border

01312

Watford City East Border

Weighted

Begin Date	End Date	BTU			BTU			AVG BTU	
		MCF	DK	Zone 25	MCF	DK	Zone 43		
6/1/2017	6/2/2017	89	108	1.204	43	49	1.130	1.180	6/1/2017
6/2/2017	6/3/2017	95	114	1.204	46	52	1.116	1.175	6/2/2017
6/3/2017	6/4/2017	72	87	1.204	144	162	1.122	1.149	6/3/2017
6/4/2017	6/5/2017	78	94	1.204	56	64	1.129	1.173	6/4/2017
6/5/2017	6/6/2017	96	115	1.204	59	68	1.140	1.180	6/5/2017
6/6/2017	6/7/2017	108	130	1.204	88	98	1.121	1.167	6/6/2017
6/7/2017	6/8/2017	104	125	1.204	68	76	1.120	1.171	6/7/2017
6/8/2017	6/9/2017	87	105	1.204	41	46	1.115	1.175	6/8/2017
6/9/2017	6/10/2017	70	84	1.204	56	62	1.120	1.167	6/9/2017
6/10/2017	6/11/2017	70	85	1.204	38	42	1.114	1.172	6/10/2017
6/11/2017	6/12/2017	83	100	1.204	35	39	1.117	1.178	6/11/2017
6/12/2017	6/13/2017	86	104	1.204	69	78	1.130	1.171	6/12/2017
6/13/2017	6/14/2017	104	125	1.204	39	43	1.128	1.183	6/13/2017
6/14/2017	6/15/2017	110	133	1.204	42	48	1.129	1.183	6/14/2017
6/15/2017	6/16/2017	89	107	1.204	49	54	1.119	1.174	6/15/2017
6/16/2017	6/17/2017	73	88	1.204	38	43	1.133	1.180	6/16/2017
6/17/2017	6/18/2017	83	100	1.204	46	52	1.123	1.175	6/17/2017
6/18/2017	6/19/2017	83	99	1.204	57	64	1.128	1.173	6/18/2017
6/19/2017	6/20/2017	92	110	1.204	96	108	1.120	1.161	6/19/2017
6/20/2017	6/21/2017	88	106	1.204	43	48	1.124	1.178	6/20/2017
6/21/2017	6/22/2017	84	101	1.204	33	37	1.118	1.180	6/21/2017
6/22/2017	6/23/2017	97	117	1.204	53	59	1.125	1.176	6/22/2017
6/23/2017	6/24/2017	118	142	1.204	36	40	1.121	1.185	6/23/2017
6/24/2017	6/25/2017	109	131	1.204	38	43	1.120	1.182	6/24/2017
6/25/2017	6/26/2017	97	117	1.204	33	38	1.149	1.190	6/25/2017
6/26/2017	6/27/2017	79	95	1.204	27	31	1.143	1.188	6/26/2017
6/27/2017	6/28/2017	79	95	1.204	64	70	1.114	1.164	6/27/2017
6/28/2017	6/29/2017	82	98	1.204	54	60	1.125	1.173	6/28/2017
6/29/2017	6/30/2017	94	114	1.204	49	56	1.150	1.185	6/29/2017
6/30/2017	7/1/2017	69	83	1.204	31	35	1.145	1.186	6/30/2017
		2,668	3,212		1,571	1,765	1.1263	1.1758	

ROW ID	LOCATION DESCRIPTION	GROSS HEATING VALUE (BTU/GCF)	SPECIFIC GRAVITY	WOBBE (cal)	CRICONDENTHERM (deg F)	NITROGEN (mole percent)	CARBON DIOXIDE (mole percent)	METHANE (mole percent)	ETHANE (mole percent)	PROPANE (mole percent)	NORMAL BUTANE (mole percent)	ISO BUTANE (mole percent)	PENTANE (mole percent)	ISO PENTANE (mole percent)	NEO PENTANE (mole percent)	HEXANES PLUS (mole percent)	HYDROGEN (mole percent)	HELIUM (mole percent)	PRODUCTION DATE	POSTING DATE	ChangeTimestamp	NOTES
11587	GLEN ULLIN	1062.3	0.6149	1354.7	-70.3	1.4567	0.8813	88.5045	8.582	0.4029	0.0193	0.0112	0.0009	0.0012	0	0.0003	0.1223	0.0166	5/31/2017	6/1/2017	6/1/2017 3:10:22 PM	
11587	GLEN ULLIN	1061.7	0.6138	1355.1	-70.7	1.3791	0.8882	88.7888	8.3373	0.4289	0.0205	0.0126	0.0009	0.0014	0	0.0004	0.1246	0.0189	6/1/2017	6/2/2017	6/2/2017 3:08:44 PM	
11587	GLEN ULLIN	1058.2	0.6115	1353.3	-72	1.4032	0.8703	89.2139	7.9117	0.4125	0.0232	0.0145	0.0019	0.0025	0	0.0006	0.1276	0.0189	6/2/2017	6/3/2017	6/3/2017 3:09:13 PM	
11587	GLEN ULLIN	1054.1	0.6086	1351.1	-74.1	1.3866	0.8623	89.7927	7.3583	0.4053	0.0231	0.0144	0.0018	0.0024	0	0.0008	0.1341	0.0189	6/3/2017	6/4/2017	6/4/2017 3:08:05 PM	
11587	GLEN ULLIN	1055.1	0.6093	1351.7	-73.2	1.3994	0.8492	89.8414	7.3714	0.4233	0.0249	0.0164	0.0022	0.0029	0	0.001	0.0523	0.0189	6/4/2017	6/5/2017	6/5/2017 3:09:15 PM	
11587	GLEN ULLIN	1057	0.6097	1353.7	-68.3	1.3402	0.8425	89.8382	7.3939	0.4596	0.031	0.0224	0.0033	0.0045	0	0.0021	0.0442	0.018	6/5/2017	6/6/2017	6/6/2017 3:08:05 PM	
11587	GLEN ULLIN	1058.3	0.6105	1354.5	-64.9	1.3159	0.8558	89.7018	7.5117	0.4687	0.0355	0.0258	0.0039	0.0054	0	0.0026	0.0557	0.0173	6/6/2017	6/7/2017	6/7/2017 3:07:55 PM	
11587	GLEN ULLIN	1052.5	0.607	1350.9	-74.5	1.3486	0.8498	90.2539	7.0444	0.3804	0.0247	0.0174	0.0024	0.0034	0	0.0012	0.0567	0.0171	6/7/2017	6/8/2017	6/8/2017 3:10:53 PM	
11587	GLEN ULLIN	1047.2	0.6034	1348.1	-78.9	1.3688	0.8188	90.9154	6.4178	0.3584	0.0211	0.0143	0.0017	0.0024	0	0.0008	0.0629	0.0171	6/8/2017	6/9/2017	6/9/2017 3:07:53 PM	
11587	GLEN ULLIN	1050.1	0.6052	1349.9	-76.8	1.3522	0.8263	90.5951	6.7424	0.3719	0.021	0.0161	0.0018	0.0029	0	0.001	0.0525	0.0168	6/9/2017	6/10/2017	6/10/2017 3:07:40 PM	
11587	GLEN ULLIN	1061.1	0.6132	1355.1	-60.8	1.3884	0.8665	89.2406	7.7998	0.5334	0.0442	0.0336	0.0053	0.0074	0	0.003	0.0596	0.0174	6/10/2017	6/11/2017	6/11/2017 3:07:17 PM	
11587	GLEN ULLIN	1061.2	0.6132	1355.2	-60.7	1.3834	0.8648	89.1818	7.8883	0.5026	0.0416	0.0318	0.0052	0.0071	0	0.0031	0.0739	0.0174	6/11/2017	6/12/2017	6/12/2017 3:07:59 PM	
11587	GLEN ULLIN	1050.4	0.6056	1349.8	-77.1	1.3574	0.84	90.4364	6.9217	0.3228	0.0215	0.0129	0.0022	0.0025	0	0.001	0.0642	0.0184	6/12/2017	6/13/2017	6/13/2017 3:07:31 PM	
11587	GLEN ULLIN	1047	0.6029	1348.5	-76.1	1.3179	0.8306	91.005	6.3531	0.3493	0.0247	0.0171	0.0023	0.0032	0	0.0013	0.0754	0.0188	6/13/2017	6/14/2017	6/14/2017 3:09:04 PM	
11587	GLEN ULLIN	1046.3	0.6027	1347.8	-81.4	1.3362	0.8312	90.9835	6.4633	0.2908	0.0135	0.0082	0.0003	0.0005	0	0	0.0584	0.0142	6/14/2017	6/15/2017	6/15/2017 3:09:23 PM	
11587	GLEN ULLIN	1049.5	0.6055	1348.7	-78.2	1.4327	0.8224	90.4368	6.8662	0.3381	0.0165	0.0117	0.001	0.0016	0	0.0006	0.0575	0.0168	6/15/2017	6/16/2017	6/16/2017 3:11:50 PM	
11587	GLEN ULLIN	1053.3	0.6077	1351.2	-75.5	1.3891	0.8308	90.0876	7.2291	0.3647	0.0201	0.0149	0.0018	0.0027	0	0.0008	0.0417	0.0176	6/16/2017	6/17/2017	6/17/2017 3:08:06 PM	
11587	GLEN ULLIN	1054.1	0.6084	1351.5	-75.7	1.3977	0.8402	89.8758	7.432	0.3446	0.0187	0.0122	0.0011	0.0018	0	0.0004	0.0571	0.0187	6/17/2017	6/18/2017	6/18/2017 3:09:18 PM	
11587	GLEN ULLIN	1055.5	0.6095	1352	-73.9	1.411	0.842	89.7407	7.4931	0.3969	0.0237	0.0156	0.0019	0.0027	0	0.0006	0.0545	0.0186	6/18/2017	6/19/2017	6/19/2017 3:11:00 PM	
11587	GLEN ULLIN	1054.8	0.609	1351.6	-73.9	1.4108	0.8372	89.8786	7.3679	0.3971	0.0255	0.0168	0.0023	0.003	0	0.0008	0.0429	0.0176	6/19/2017	6/20/2017	6/20/2017 3:09:11 PM	
11587	GLEN ULLIN	1057.8	0.6104	1354	-56.9	1.4073	0.8099	89.8164	7.2572	0.5461	0.0471	0.035	0.0057	0.0078	0	0.0045	0.0454	0.0184	6/20/2017	6/21/2017	6/21/2017 3:11:10 PM	
11587	GLEN ULLIN	1060.9	0.6128	1355.2	-41.9	1.466	0.7964	89.6072	7.1622	0.72	0.0754	0.0585	0.0104	0.0142	0	0.0096	0.061	0.018	6/21/2017	6/22/2017	6/22/2017 3:16:34 PM	
11587	GLEN ULLIN	1048	0.6045	1347.9	-80.1	1.4724	0.7922	90.5638	6.7626	0.3146	0.0134	0.0075	0.0002	0.0002	0	0	0.0553	0.019	6/22/2017	6/23/2017	6/23/2017 3:08:17 PM	
11587	GLEN ULLIN	1047.6	0.6031	1348.9	-80.8	1.4544	0.736	90.6976	6.6676	0.3042	0.014	0.0077	0.0003	0.0003	0	0.0001	0.0995	0.0179	6/23/2017	6/24/2017	6/24/2017 3:09:25 PM	
11587	GLEN ULLIN	1050	0.6059	1348.9	-78.4	1.4842	0.7936	90.1079	7.1093	0.3173	0.0151	0.0081	0.0004	0.0004	0	0.0001	0.145	0.0203	6/24/2017	6/25/2017	6/25/2017 3:09:47 PM	
11587	GLEN ULLIN	1049.1	0.6053	1348.4	-79	1.4495	0.816	90.2379	6.9921	0.3102	0.0144	0.0077	0	0.0009	0	0	0.1642	0.02	6/25/2017	6/26/2017	6/26/2017 3:09:07 PM	
11587	GLEN ULLIN	1049.1	0.6053	1348.4	-79	1.4498	0.8164	90.2354	6.9941	0.3102	0.0144	0.0077	0	0.0009	0	0	0.1646	0.02	6/26/2017	6/27/2017	6/27/2017 3:09:06 PM	
11587	GLEN ULLIN	1049.1	0.6053	1348.4	-79	1.4498	0.8164	90.2354	6.9941	0.3102	0.0144	0.0077	0	0.0009	0	0	0.1646	0.02	6/27/2017	6/28/2017	6/28/2017 3:10:44 PM	
11587	GLEN ULLIN	1049.1	0.6053	1348.4	-79	1.4498	0.8164	90.2354	6.9941	0.3102	0.0144	0.0077	0	0.0009	0	0	0.1646	0.02	6/28/2017	6/29/2017	6/29/2017 3:09:26 PM	
11587	GLEN ULLIN	1049.1	0.6053	1348.4	-79	1.4475	0.8161	90.2354	6.9945	0.3105	0.0144	0.0077	0	0.0009	0	0	0.1626	0.0191	6/29/2017	6/30/2017	6/30/2017 3:09:41 PM	
11587	GLEN ULLIN	1049.1	0.6053	1348.4	-79	1.4434	0.8154	90.2354	6.9953	0.3111	0.0144	0.0077	0	0.0009	0	0	0.1591	0.0173	6/30/2017	7/1/2017	7/1/2017 3:09:43 PM	

31 record(s) retrieved.

Zone 802

NORTH DAKOTA HEATING VALUE ZONES		
ZONES	MEASURING DEVICE	LOCATION
211	Chromatograph	Sidney Border
24	Monthly Sampler	Williston Border
241	Monthly Sampler	Fairview Border
25	Monthly Sampler	Watford City West Border
260	Chromatograph	North Tioga Transfer
261	Chromatograph	Tioga Comp Station – Robinson Lake Plant
262	Chromatograph	Minot Border
263	Monthly Sampler	Lignite Plant
264	Monthly Sampler	Epping Border
265	Chromatograph	Tioga Comp Station – County Line Plant
266	Chromatograph	County Line Plant
271	Chromatograph	Bismarck – Cleveland
272	Chromatograph	Cleveland – Mapleton
273	Chromatograph	Cleveland – Grafton
28	Chromatograph	Bismarck Station
31	Chromatograph	Dickinson Border
32	Chromatograph	Cabin Creek Station
33	Chromatograph	Little Knife Plant
34	Monthly Sampler	Bowman Border
43	Chromatograph	Spring Creek
600	Chromatograph	Hankinson Area
610	Monthly Sampler & Chromatograph	Watford City
802	Chromatograph	Linton

MONTANA DAKOTA UTILITIES CO
 NORTH DAKOTA
 HEATING VALUE DATA

STATE	ZONE	ZONE BOUNDARY	12 MONTH AVERAGE	JUNE 17	MAY 17	APRIL 17	MAR 17	FEB 17	JAN 17	DEC 16	NOV 16	OCT 16	SEPT 16	AUG 16	JULY 16	ZONE
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1200	1191	1206	1191	1194	1195	1199	1199	1200	1193	1209	1210	1208	211
ND	24	Williston Border - Charbonneau Station	1174	1141	1148	1158	1171	1173	1189	1190	1187	1169	1195	1169	1197	24
ND	25	Wattford City West Border	1203	1204	1204	1200	1199	1202	1198	1193	1200	1206	1211	1213	1211	25
ND	28	Bismarck Station - Glen Ullin Station	1154	1188	1191	1161	1118	1121	1115	1112	1122	1152	1172	1185	1208	28
ND	31	Dickinson Brd - Belfield Tfr - G Ullin Stn	1138	1171	1137	1147	1118	1119	1113	1110	1120	1153	1171	1169	1124	31
ND/MT	32	Cabin Creek Station - Belfield Transfer	1123	1122	1097	1104	1112	1114	1118	1118	1099	1137	1153	1150	1157	32
ND	33	Little Knife Plant	1182	1177	1177	1178	1176	1177	1181	1200	1179	1182	1184	1183	1184	33
ND	34	Bowman Border	996	996	996	996	996	996	996	996	996	996	996	996	996	34
ND	43	Spring Creek I - Sax Valve I	1114	1126	1136	1141	1102	1075	1121	1122	1114	1109	1128	1109	1089	43
ND/MT	241	Fairview Border	1186	1161	1168	1167	1179	1181	1196	1200	1193	1170	1210	1200	1202	241
ND	260	North Tioga Transfer - Nesson Plant		1087	1090	1082	0									260
ND	261	Tioga Comp Station - Robinson Lake Plan	1113	1181	1176	1170	1065	1089	1105	1096	1034	981	1174	1074	1206	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1174	1189	1192	1189	1181	1178	1152	1144	1147	1141	1172	1191	1208	262
ND	263	Lignite Plant	1119	1135	1115	1103	1115	1112	1103	1110	1138	1120	1129	1127	1118	263
ND	264	Epping Border	1168	1133	1145	1154	1158	1172	1186	1186	1158	1157	1194	1198	1169	264
ND	265	Tioga Comp Station - County Line Plant	1177	1181	1176	1170	1174	1175	1184	1170	1182	1180	1186	1166	1177	265
ND	266	County Line Plant		1183	1185	1185	1173	1182	0							266
ND	271	Bismarck Station - Cleveland Station	1166	1188	1192	1189	1163	1155	1129	1127	1140	1142	1173	1185	1208	271
ND	272	Cleveland Station - Mapleton	1165	1188	1191	1187	1161	1153	1128	1126	1139	1142	1172	1184	1207	272
ND	273	Cleveland Station - Grafton Border	1165	1189	1192	1187	1162	1154	1128	1127	1139	1142	1172	1184	1207	273
ND	610	MDU-Wattford City BTU	1181	1176	1183	1188	1171	1163	1170	1162	1176	1179	1197	1206	1203	610
ND	802	Linton	1055	1054	1063	1059	1054	1052	1049	1051	1058	1053	1058	1059	1054	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903

**THERMAL ZONE VARIANCE
DOCUMENTATION**

June 2017

ZONE	<i>BTU VARIANCE</i>	<i>REASON</i>
31	34	Operational – Delivery on and off during the month
32	25	Operational – Delivery on and off during the month
263	20	Plant Operation
433	-27	Plant Operation